

Bureau of Environmental Health
 8930 Stanford Boulevard, Columbia, MD 21045
 Main: 410-313-2640 | Fax: 410-313-2648
 TDD 410-313-2323 | Toll Free 1-866-313-6300
www.hchealth.org
 Facebook: www.facebook.com/hocohealth

Maura J. Rossman, M.D., Health Officer

RECEIPT DATE: 1-18-17 **ONSITE SEWAGE DISPOSAL SYSTEM** P 560510-A
 APPROVAL DATE: 2-15-17 **PERMIT: CONSTRUCTION** A _____

PROPERTY ADDRESS: 11813 Collie Court

SUBDIVISION: Fulton Valley Manor LOT: 7 TAX ID: 05-597698

CONTRACTOR: Legacy Septic Excavation EMAIL: _____

CONTRACTOR ADDRESS: 1538 Monroeville PHONE: _____

CONTRACTOR CERTIFIED FOR BAT INSTALLATION: MDE MANUFACTURER:

PROPERTY OWNER: Collie, LLC. EMAIL: _____

OWNER ADDRESS: 5300 Dorsey Hall Drive, Suite 102 Ellicott, City, MD 21042 PHONE: 443-367-0422

BAT UNIT MODEL: 1500 PUMP SIZE: N/A PUMP TANK CAPACITY: N/A

OPERATION & MAINTENANCE AGREEMENT DATE SIGNED: _____ DATE RECORDED: _____

DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 5 APPLICATION RATE: 1.2

TRENCHES:	LINEAR FEET REQUIRED: <u>178 130'</u>	INLET DEPTH: <u>3.5</u>
	TRENCH WIDTH: <u>23'</u>	MAXIMUM BOTTOM DEPTH: <u>6</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>4</u>

LOCATION: **PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND BAT UNIT LOCATION MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.**

NOTES: Install 2 x 65' trenches.

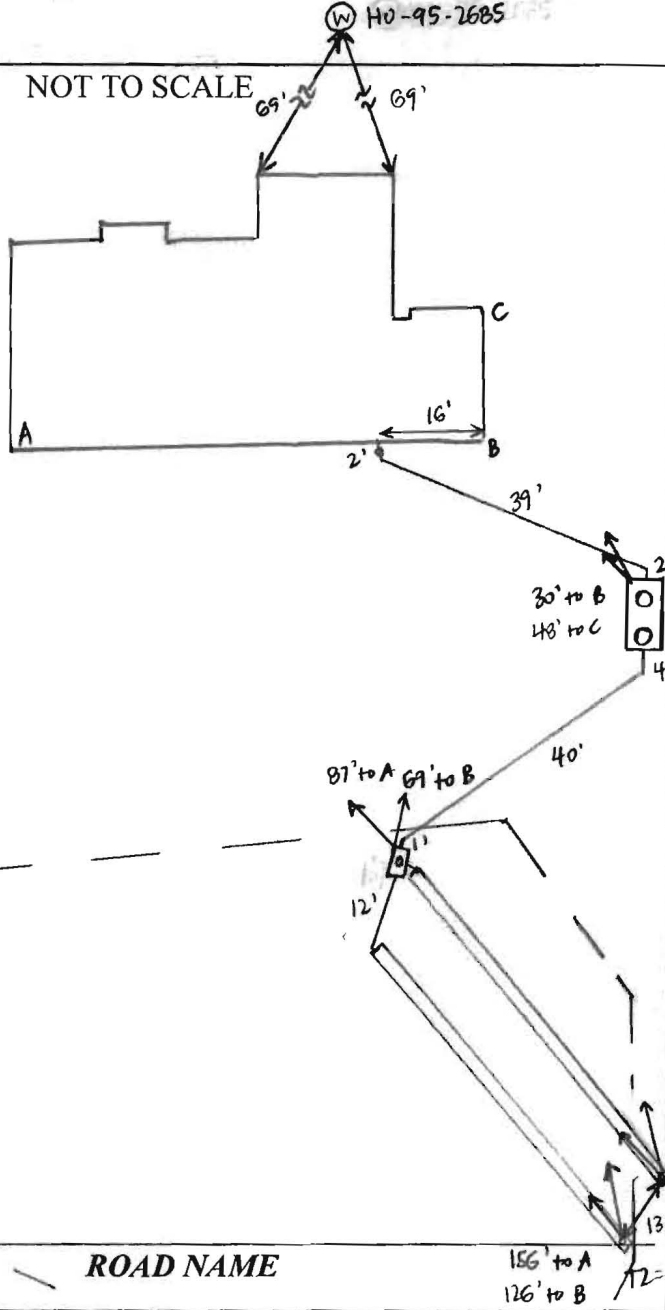
ISSUED BY: Robert Freemon ISSUE DATE: 1-18-17 EXPIRATION DATE: 1-18-18

- NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION
- NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING
- NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.
- NOTE: WATERTIGHT SEPTIC TANKS REQUIRED
- NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRADIENT FROM ANY WATER WELL
- NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS
- NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM
 ELECTRICAL PERMIT ISSUED E _____
- NOTE: AN INDIVIDUAL CERTIFIED BY MDE AND THE MANUFACTURER FOR BAT INSTALLATION MUST BE PRESENT AT ALL TIMES DURING BAT INSTALLATION.
- NOTE: MDE RECOMMENDS SEPTIC TANKS, BAT, AND OTHER PRETREATMENT UNITS BE PUMPED AT A FREQUENCY ADEQUATE TO ENSURE THAT SOLIDS ARE NOT DISCHARGED TO THE DISPOSAL AREA

**NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM.
 PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT.
 CALL 410-313-1771 TO SCHEDULE INSPECTIONS.**

W 10-95-2685

NOT TO SCALE



TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
3'	3.5'	6'
NUMBER OF TRENCHES		2
TOTAL LENGTH		130'
ABSORPTION AREA		390' SIDE
DISTRIBUTION BOX LEVEL		YES
DISTRIBUTION BOX BAFFLE		BLOCK
DISTRIBUTION BOX PORT		YES

SEPTIC TANK DATA

SEPTIC TANK I LEVEL	YES
MANUFACTURER	MAYER BROS
CAPACITY	1500 GAL
SEAM LOC	TOP
TANK LID DEPTH	1'
BAFFLES	YES
BAFFLE FILTER	NO
MANHOLE LOC	FRONT + REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	YES
DATE ON LID	

PUMP/SEPTIC TANK LEVEL

MANUFACTURER	
CAPACITY	GAL
SEAM LOC	
TANK LID DEPTH	
BAFFLES	
BAFFLE FILTER	
MANHOLE LOC	
6" PORT LOC	
WATERTIGHT TEST	
SLOTTED	
DATE ON LID	

PRE-CONSTRUCTION:

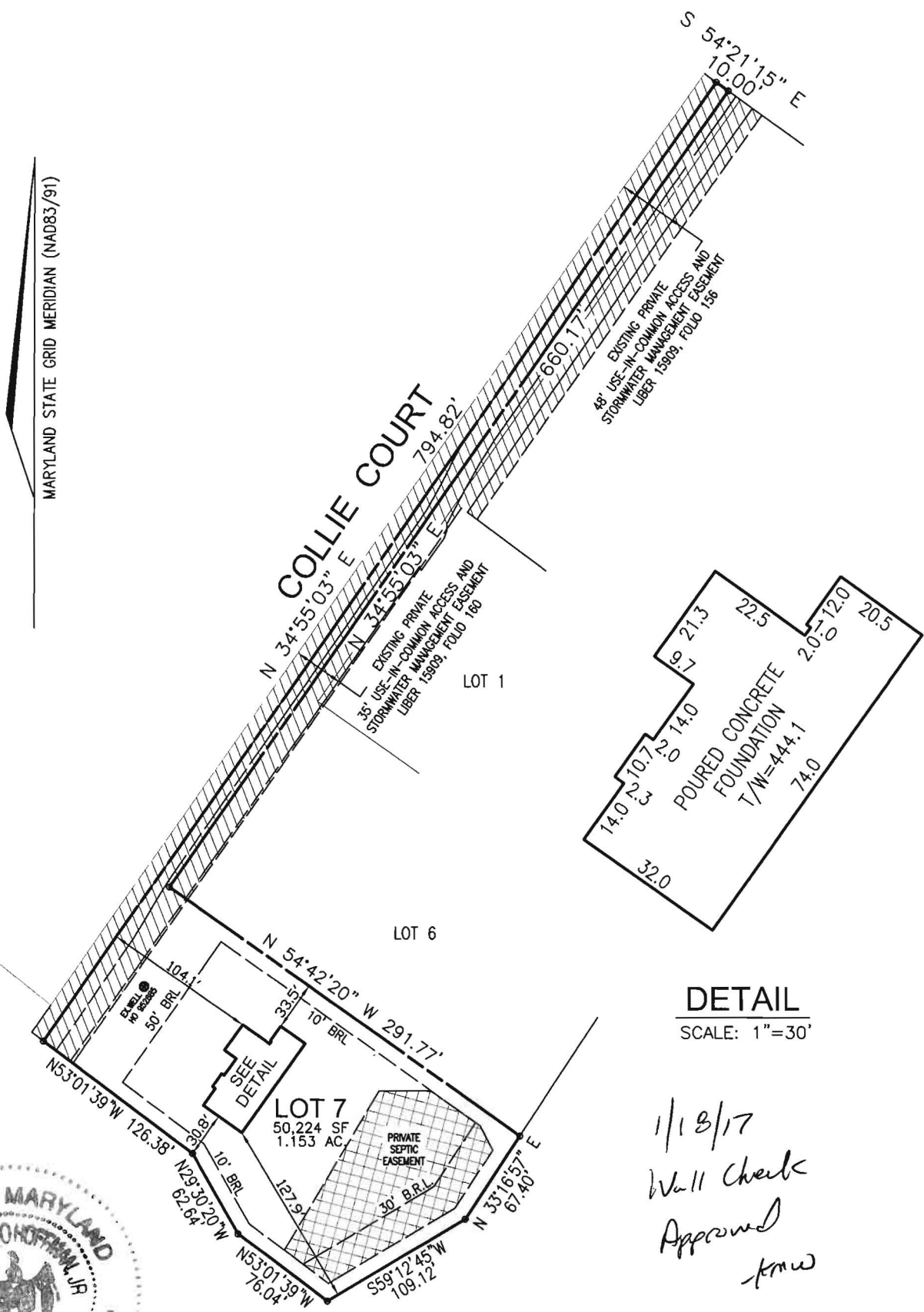
1/20/17 Met Legacy on site for layout. All SDA + tank stakes present. Legacy had shot contour + laid out trenches - checked elevations at trench starts + ends. Install 2 x 65' trenches. (SC)

INSTALLATION: 2/10/17 Tank installed, trenches complete. T1 left open, T2 open at ends; 3' wide, 3.5' 4' to stone. No baffle in D-box - Legacy added part of a cinder block to act as a baffle during site visit. Levelled speed levelers in D-box. Need house connection. (SC) 02/15/2017 Inspected house connection to Septic. Approved to backfill. (SC)

FINAL INSPECTOR

DATE OF APPROVAL 02/15/2017

THIS WALL CHECK DRAWING CONTAINS A HORIZONTAL TOLERANCE IN ACCURACY OF 0.1' AND A VERTICAL TOLERANCE IN ACCURACY OF 0.2'



DETAIL
SCALE: 1"=30'

1/18/17
Wall Check
Approved
T.M.H.



I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF THAT THE IMPROVEMENTS ARE LOCATED AS SHOWN AND THERE ARE NO ENCROACHMENTS EXCEPT AS SHOWN.

Thomas M. Hoffman Jr.
THOMAS M. HOFFMAN JR., PROPERTY LINE SURVEYOR #267 DATE **7.21.16**

PROFESSIONAL CERTIFICATION; I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROPERTY LINE SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 267, EXPIRATION DATE JULY 28, 2018.

SCALE 1"= 100'	DATE 07/20/2016	ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS - SURVEYORS - PLANNERS 8407 MAIN STREET ELLICOTT CITY, MARYLAND 21043 TEL: 410-461-7666 FAX: 410-461-8961	WALL CHECK DRAWING 11813 COLLIE COURT LOT 7 FULTON MANOR VALLEY PLAT NO. 23140 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DRAWN BY B.D.A.	CHECKED BY T.M.H.		
PLAT NUMBER 23139-23141	JOB NUMBER 14-24.00		

FTFinksburg Dispatch
410-833-4400Finksburg Sales
410-833-4400Laurel Sand & Gravel, Inc. T/A
S. W. Barrick & Sons
Finksburg Terminal

FINKSBURG, MARYLAND

Mailing Address: P.O. Box 1504 Laurel, Maryland 20725

INSPECTOR'S COPY

FAX
410-833-4909BILLING INQUIRIES
1-800-762-2294

TICKET #00389996

STATION FT

DATE 02/08/17 TIME 08:27:20

CUSTOMER LEGSEP

LEGACY SEPTIC & EXCAVATION LLC
538 MANCHESTER RD
ESTMINSTER, MD 21157TRUCK 448A LICENSE
RIVER; K. D. CAPLE

3 AXLES

ROSS	SCALE A	69460 lb
ARE IN	(STORED)	24140 lb
ET		45320 lb
ET		22.66 t

JOB DOUNOM : DOUGLAS HOMES

P.O. # PROJECT #:
11813 COLLIE CT LOT #7
TURN IN AT DOUGLAS HOMES TRAILER
ERNESTO 443-789-7528
GEORGE 301-370-4121

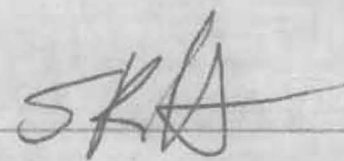
	Loads	Tons
DAILY	2	44.38
TOTAL	10	196.45
TIME IN 08:27:20		TIME OUT 08:27:20

MAT'L 0022 : #2 STONE - WASHED
ALL ZONE N-09

EIGHMASTER _____

Jim Cooke

RECEIVED BY _____



FTFinksburg Dispatch
410-833-4400Finksburg Sales
410-833-4400Laurel Sand & Gravel, Inc. T/A
S. W. Barrick & Sons
Finksburg Terminal

FINKSBURG, MARYLAND

Mailing Address: P.O. Box 1504 Laurel, Maryland 20725

INSPECTOR'S COPYFAX
410-833-4909BILLING INQUIRIES
1-800-762-2294

TICKET #00390010

STATION FT

DATE 02/08/17 TIME 10:20:43

CUSTOMER LEGSEP
EBCY SEPTIC & EXCAVATION LLC
538 MANCHESTER RD
ESTMINSTER, MD 21157JOB DOUNOM : DOUGLAS HOMES
P.O. # PROJECT #:
11813 COLLIE CT LOT #7
TURN IN AT DOUGLAS HOMES TRAILER
ERNESTO 443-789-7528
GEORGE 301-370-4121TRUCK 471A LICENSE
RIVER: KRUG'S TRUCKING 3 AXLES

				Loads	Tons
ROSS	SCALE A	69520 lb	DAILY	3	66.11
ARE	IN (STORED)	26060 lb	TOTAL	11	218.18
ET		43460 lb	TIME IN 10:20:43		TIME OUT 10:20:43
ET		21.73 t			

MAT'L 0022 : #2 STONE - WASHED
PAUL ZONE N-09EIGHMASTER _____
Jim Cooke

RECEIVED BY _____

FTFinksburg Dispatch
410-833-4400Finksburg Sales
410-833-4400Laurel Sand & Gravel, Inc. T/A
S. W. Barrick & Sons
Finksburg Terminal

FINKSBURG, MARYLAND

Mailing Address: P.O. Box 1504 Laurel, Maryland 20725

INSPECTOR'S COPY

FAX
410-833-4909BILLING INQUIRIES
1-800-762-2294

TICKET #00389992

STATION FT

DATE 02/08/17 TIME 08:14:12

CUSTOMER LEGSEP

EGACY SEPTIC & EXCAVATION LLC
538 MANCHESTER RD
ESTMINSTER, MD 21157

JOB DOUJOM : DOUGLAS HOMES

P.O. # PROJECT #:
11813 COLLIE CT LOT #7
TURN IN AT DOUGLAS HOMES TRAILER
ERNESTO 443-789-7528
GEORGE 301-370-4121

TRUCK 471A LICENSE

RIVER: KRUG'S TRUCKING

3 AXLES

ROSS	SCALE A	69500 lb
ARE	IN (STORED)	26060 lb
ET		43440 lb
ET		21.72 t

	Loads	Tons
DAILY	1	21.72
TOTAL	9	173.79
TIME IN 08:14:12		TIME OUT 08:14:12

AT'L 0022 : #2 STONE - WASHED
AUL ZONE N-09

EIGHMASTER

Jim Cooke

RECEIVED BY



Oswald, Hank

From: Charles Wimmer <cwimmer@douglashomesinc.com>
Sent: Monday, June 13, 2016 4:43 PM
To: Oswald, Hank
Subject: Re: FW: Plans

See below

Thanks,
Charles Wimmer
Douglas Homes
410-660-9305

On Mon, Jun 13, 2016 at 4:16 PM, Oswald, Hank <hoswald@howardcountymd.gov> wrote:

Charles:

I don't think you responded to this email. When you have a minute, please respond to the questions below.

Thanks,

Hank

From: Oswald, Hank
Sent: Wednesday, April 27, 2016 9:01 AM
To: 'Charles Wimmer'
Subject: RE: Plans

Charles:

Lot 7 - FP called "The Ashdale" shows 4 bedrooms with an optional 5th bedroom on the 2nd floor. Does 5th room on the 2nd floor exist? 1st floor shows an optional full bathroom. Does the full bathroom exist on the 1st floor? Is the basement finished and is there a window in the optional "Den"?

,and there is no window in the den

Lot 9 – FP called “The Homewood” shows 4 bedrooms on the 2nd floor, 1 bedroom on the 1st floor and potentially one bedroom in the basement.

Correct with the exception of Bedroom in the basement

Hank

From: Charles Wimmer [<mailto:cwimmer@douglashomesinc.com>]
Sent: Tuesday, April 26, 2016 3:33 PM
To: Oswald, Hank
Subject: Plans

Hank I dropped off the House plans this afternoon let me know what you think

Thanks,

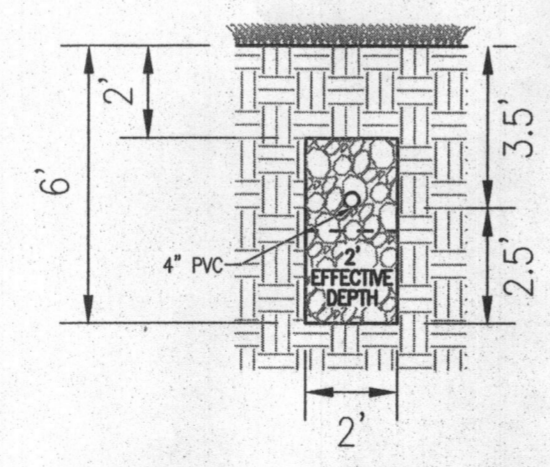
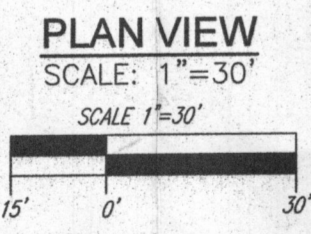
Charles Wimmer

Douglas Homes

[410-660-9305](tel:410-660-9305)



WELL LOCATION CERTIFICATION:
 THE EXISTING WELL SHOWN ON THIS PLAN (TAG #HO-95-2685) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN

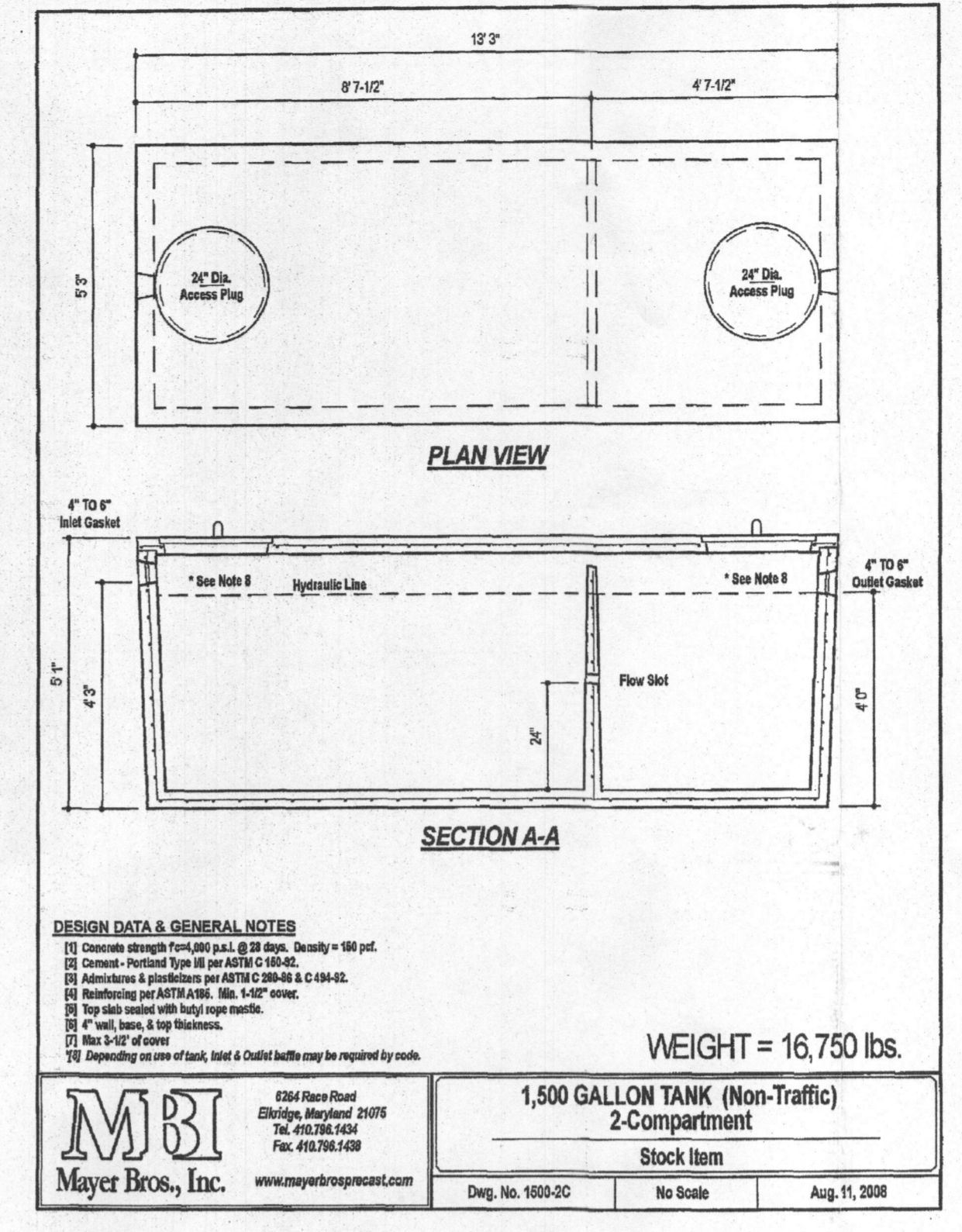


INITIAL SYSTEM AND 1ST REPLACEMENT TRENCH DETAIL
 NOT TO SCALE

SYSTEM CALCULATIONS:
INITIAL SYSTEM AND FIRST REPLACEMENT SYSTEM:
 5 BEDROOMS AT 750gpd / 1.2 ABSORPTION RATE = 625 SQ. FT.
 625 SQ. FT. / 2 (TRENCH WIDTH) x .57 (SIDEWALL REDUCTION) = 178 LINEAR FEET
 180 TOTAL LINEAR FEET OF TRENCH ARE PROVIDED WITH THE INITIAL SYSTEM.
 180 TOTAL LINEAR FEET OF TRENCH ARE PROVIDED WITH THE FIRST REPLACEMENT SYSTEM.

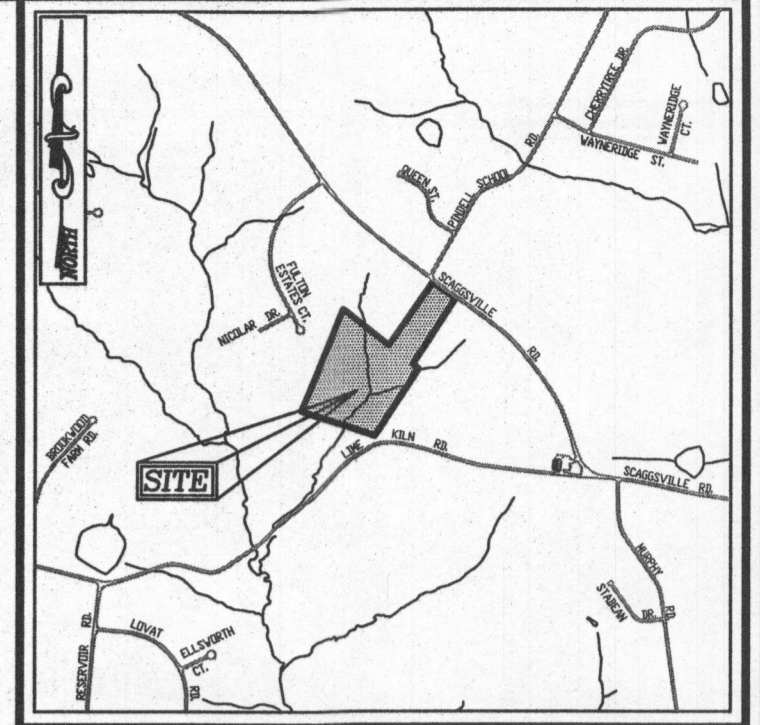
TRENCH INFO.			
TRENCH	LENGTH	TRENCH	EXISTING TRENCH
1	60'	434.88	432.38
2	60'	434.00	431.50
3	60'	433.13	430.63

THIS AREA DESIGNATES A PRIVATE SEWAGE AREA OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE AREAS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE AREA. RECONSTRUCTION OF A MODIFIED SEWAGE AREA SHALL NOT BE NECESSARY.

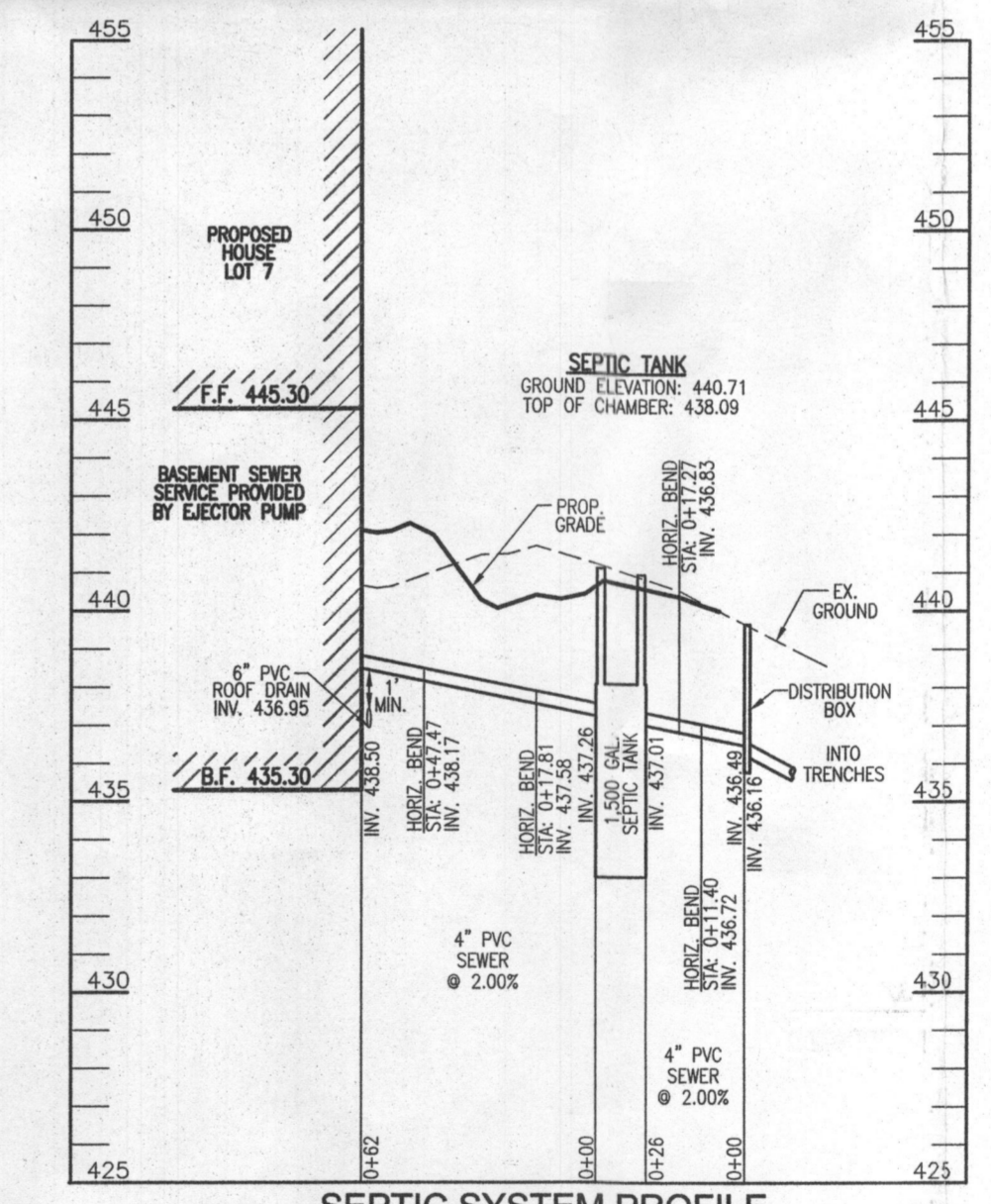


DESIGN DATA & GENERAL NOTES:
 (1) Concrete strength 4000 psi, 4" min. Density = 140 pcf.
 (2) Cement - Portland Type III per ASTM C 150-02.
 (3) Admixtures & quantities per ASTM C 494 & C 494-02.
 (4) Reinforcing per ASTM A618, Min. 4-02' cover.
 (5) Top slab finished with high strength mortar.
 (6) 4" min. cover, 4" top thickness.
 (7) Max 8-1/2" of cover.
 (8) Anchorage of rebar, hold & detail details may be required by code.

1,500 GALLON TANK (Non-Traffic) 2-Compartment
 Stock Item
 Weight = 16,750 lbs.
 MBI Mayer Bros., Inc.
 6304 River Road, Ellicott City, Maryland 21045
 Tel: 410.786.4434 Fax: 410.786.4168
 www.maybrosgroup.com
 Proj. No. 1600-02 No Scale Aug. 11, 2008



- LEGEND:**
- PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - ADJACENT PROPERTY LINE
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING 10' CONTOUR
 - EXISTING 2' CONTOUR
 - SOILS
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - EXISTING WELL
 - PROPOSED 10' CONTOUR
 - PROPOSED 2' CONTOUR
 - PROPOSED SPOT ELEVATION
 - FAILED PERC. TEST
 - PASSED PERC. TEST
 - PROP. REPLACEMENT WELL
 - EXISTING WELL FIELD LOCATED
 - APPROVED SEPTIC AREA



SEPTIC SYSTEM PROFILE
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'
 SCALE 1"=50'

Approved Septic System Plan
 Howard County Health Department
 Signature: [Signature] Date: 12/29/16
 (Approved for 5 BR Floor Plan)

OWNER: COLLE, LLC, 5300 DORSEY HALL DR., SUITE 102, ELLICOTT CITY, MARYLAND 21042, ATTN: MR. DONALD R. REUWER, JR., 443-367-0422
BUILDER: DOUGLAS HOMES, INC., 5034 DORSEY HALL DR., SUITE 102, ELLICOTT CITY, MARYLAND 21042, 410-984-4234

ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN

FULTON MANOR VALLEY - LOT 7
 11813 COLLIE COURT
 FULTON, MD 20759

BUILDING PERMIT #

TAX MAP: 41 GRID: 19 5TH ELECTION DISTRICT PARCELS: 78 & 456 ZONED: RR-150 HOWARD COUNTY, MARYLAND

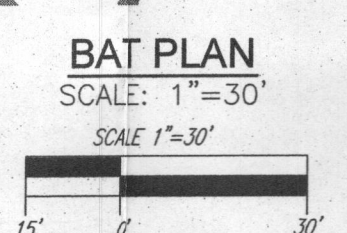
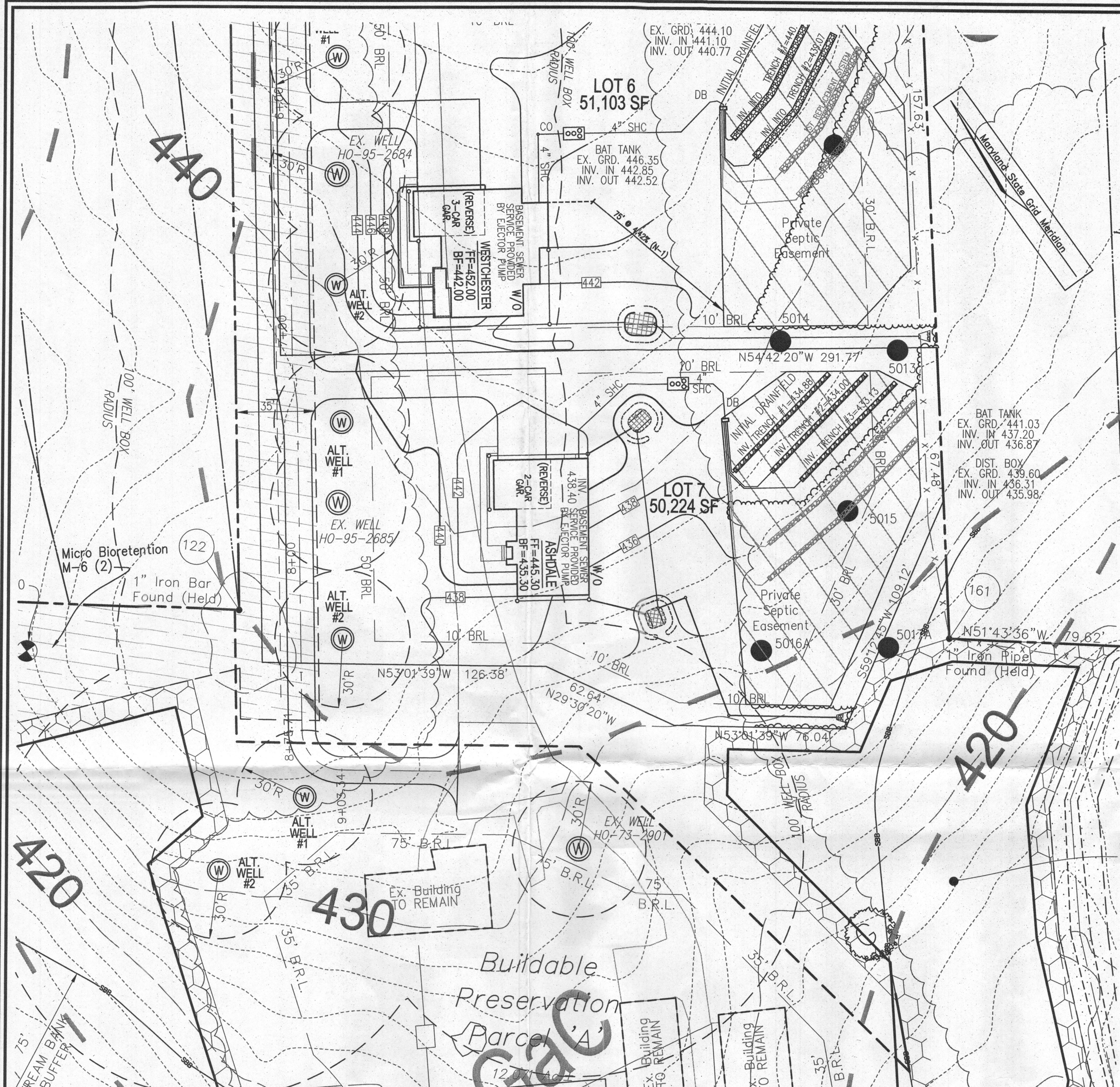
ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961



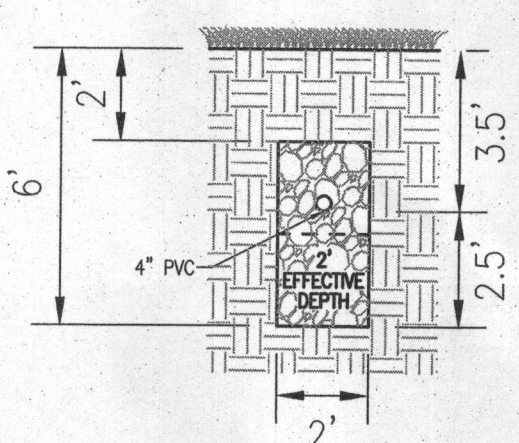
DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: DECEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 14-24

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE 09-27-2018.

- GENERAL NOTES:**
- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
 - THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
 - ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
 - THE WELL (HO-95-2685) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
 - ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.



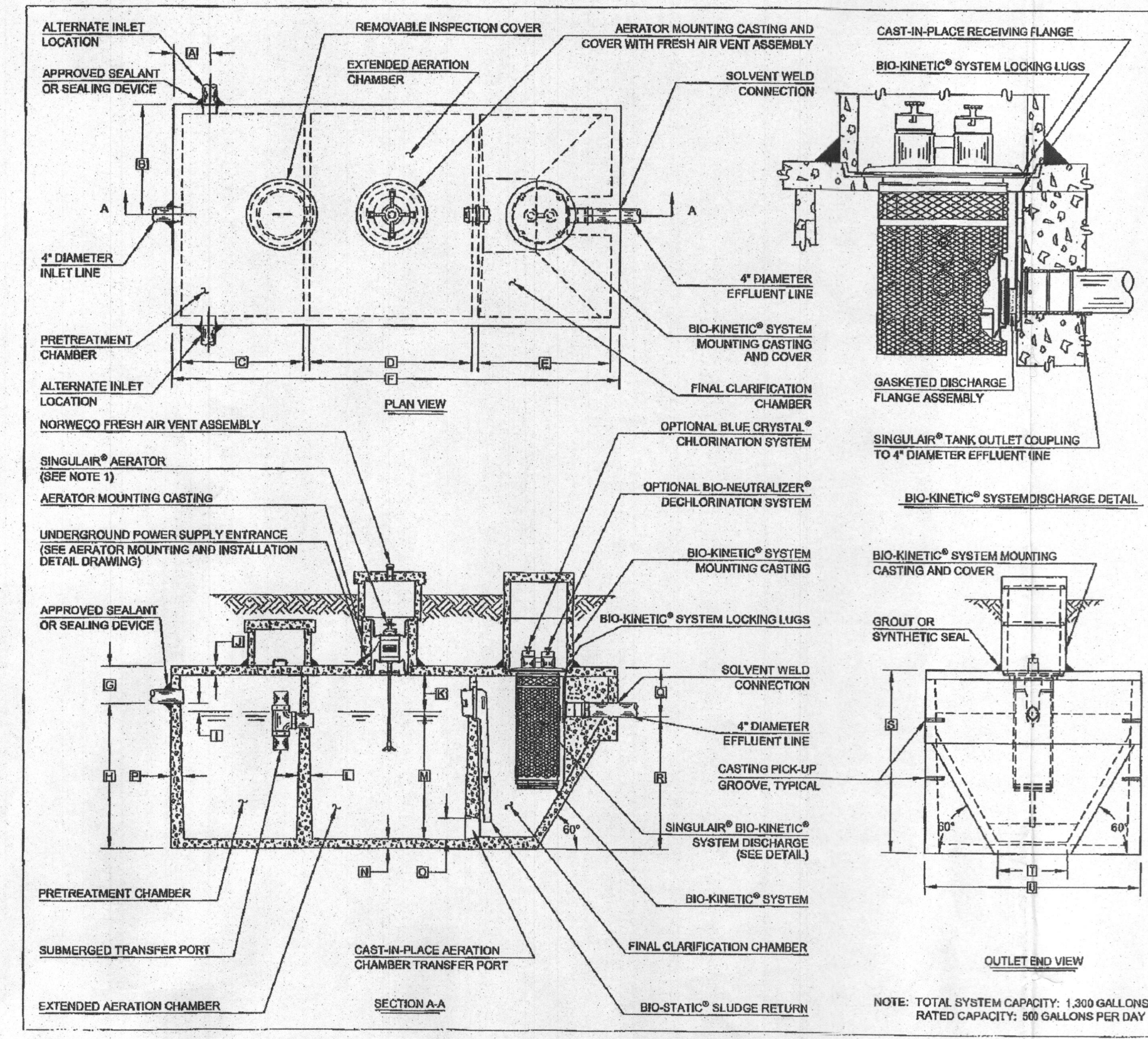
TRENCH	TRENCH LENGTH	INVERT	INVERT	EXISTING GROUND
1	60'	434.88	432.38	433.30
2	60'	434.00	431.50	437.50
3	60'	433.13	430.63	436.63



INITIAL SYSTEM AND 1ST REPLACEMENT TRENCH DETAIL
NOT TO SCALE

SYSTEM CALCULATIONS:
INITIAL SYSTEM AND FIRST REPLACEMENT SYSTEM:
 5 BEDROOMS AT 750gpd / 1.2 ABSORPTION RATE = 625 SQ. FT.
 625 SQ. FT. / 2 (TRENCH WIDTH) x 57 (SIDEWALL REDUCTION) = 178 LINEAR FEET
 180 TOTAL LINEAR FEET OF TRENCH ARE PROVIDED WITH THE INITIAL SYSTEM.
 180 TOTAL LINEAR FEET OF TRENCH ARE PROVIDED WITH THE FIRST REPLACEMENT SYSTEM.

THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT OF AT LEAST 10,000 SQ. FT. AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS EASEMENT ARE RESTRICTED. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A REVISED SEWAGE EASEMENT SHALL NOT BE NECESSARY.



GENERAL NOTES:
 1. SINGULAR® AERATOR, AS TESTED AND ACCEPTED BY NSF, OPERATING 60 MINUTES ON / 60 MINUTES OFF.
 2. FALL THROUGH SINGULAR® PLANT FROM INLET INVERT TO OUTLET INVERT IS FOUR INCHES. INLET INVERT IS TWELVE INCHES BELOW TANK TOP.
 3. ON DEEPER INSTALLATIONS, PRECAST RISERS MUST BE USED TO EXTEND AERATOR MOUNTING CASTING AND BIO-KINETIC® SYSTEM MOUNTING CASTING TO GRADE.
 4. TANK REINFORCED PER ACI STD. 318-05.
 5. REMOVABLE COVERS ON RISERS WEIGH IN EXCESS OF SEVERITY FIVE POUNDS EACH TO PREVENT UNAUTHORIZED ACCESS.
 6. CONTACT THE LOCAL LICENSED SINGULAR® DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.

PROJECT ENGINEER'S APPROVAL:
 I HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.

DATE: _____

NAME: _____

CONTRACTOR'S CERTIFICATION:
 I HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.

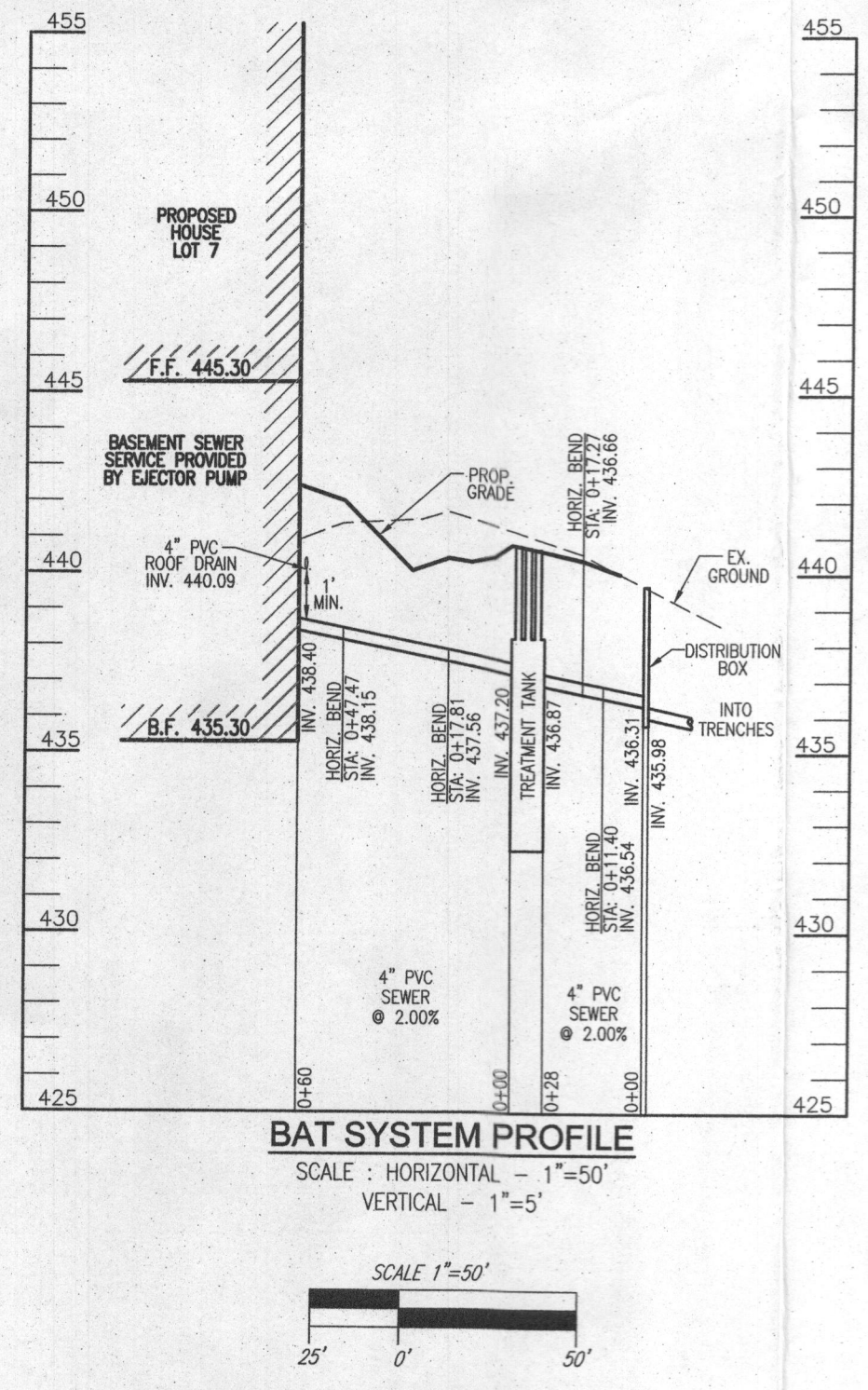
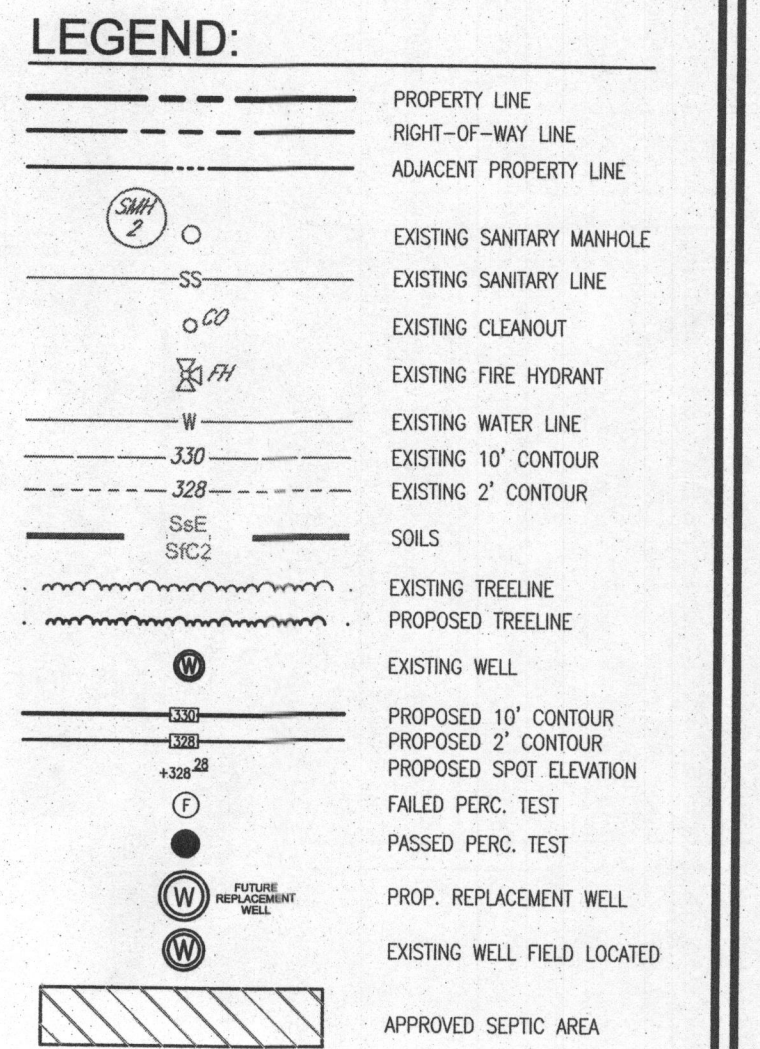
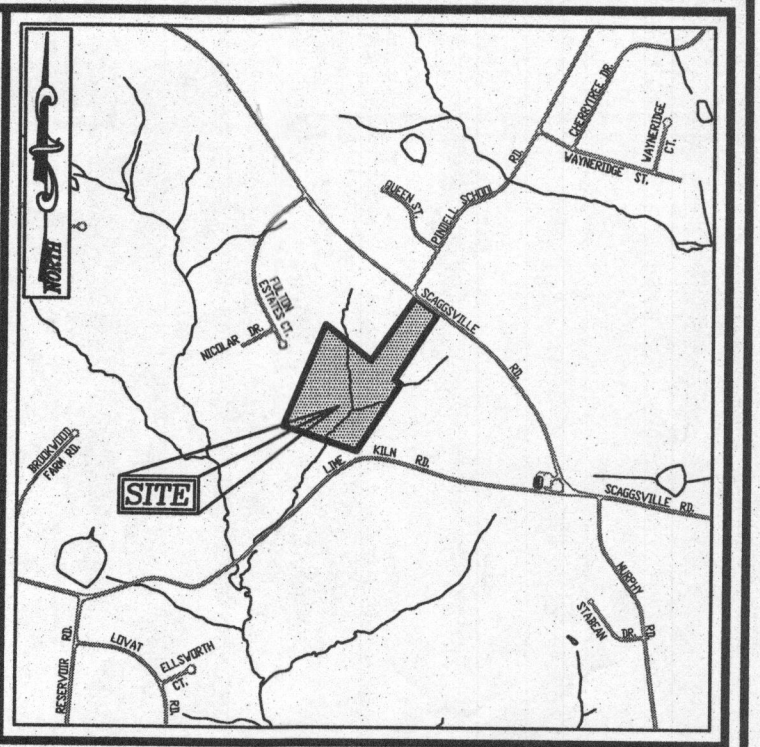
DATE: _____

NAME: _____

CRITICAL DIMENSIONS

DESCRIPTION	MIN.	MAX.
A	1'-0"	10'-0"
B	2'-4"	8'-0"
C	3'-4"	8'-0"
D	3'-0"	7'-0"
E	3'-7"	8'-0"
F	12'-2"	8'-0"
G	1'-0"	2'-0"
H	1'-0"	8'-0"
I	0'-3"	0'-0"
J	1'-0"	2'-0"
K	0'-2"	0'-0"
L	0'-2"	0'-0"
M	0'-2"	0'-0"
N	0'-2"	0'-0"
O	0'-2"	0'-0"
P	0'-2"	0'-0"
Q	0'-2"	0'-0"
R	0'-2"	0'-0"
S	0'-2"	0'-0"
T	0'-2"	0'-0"
U	0'-2"	0'-0"
V	0'-2"	0'-0"
W	0'-2"	0'-0"
X	0'-2"	0'-0"
Y	0'-2"	0'-0"
Z	0'-2"	0'-0"

NOTE: TOTAL SYSTEM CAPACITY: 1,300 GALLONS
 RATED CAPACITY: 90 GALLONS PER DAY



BAT SYSTEM PROFILE
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

GENERAL NOTES:
 1. ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
 2. THE MAXIMUM DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 3 FEET.
 3. NO BLOWER IS REQUIRED. THE NORWECO WASTEWATER TREATMENT SYSTEM HAS AN AERATOR MOUNTED IN THE TANK.
 4. THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
 5. THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
 6. WITHIN ONE MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) IN A MANNER ACCEPTABLE TO MDE, THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF BAT INSTALLED.
 7. ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
 8. AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN LAND RECORDS OF HOWARD COUNTY.
 9. THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.

Approved Septic System Plan
 Howard County Health Department
 Hans Oswald 3/22/16
 Signature Date

OWNER
 COLLIE, LLC
 5300 DORSEY HALL DR., SUITE 102
 ELLICOTT CITY, MARYLAND 21042
 ATTN: MR. DONALD R. FEUERER, JR.
 443-367-0422

BUILDER
 DOUGLAS HOMES, INC.
 5034 DORSEY HALL DR., SUITE 102
 ELLICOTT CITY, MARYLAND 21042
 410-984-4234

SITE PLAN FOR BAT INSTALLATION
FULTON MANOR VALLEY - LOT 7
 11813 COLLIE COURT
 FULTON, MD 20759
 BUILDING PERMIT # _____

TAX MAP: 41 GRID: 19
 5TH ELECTION DISTRICT

PARCELS: 78 & 456
 HOWARD COUNTY, MARYLAND

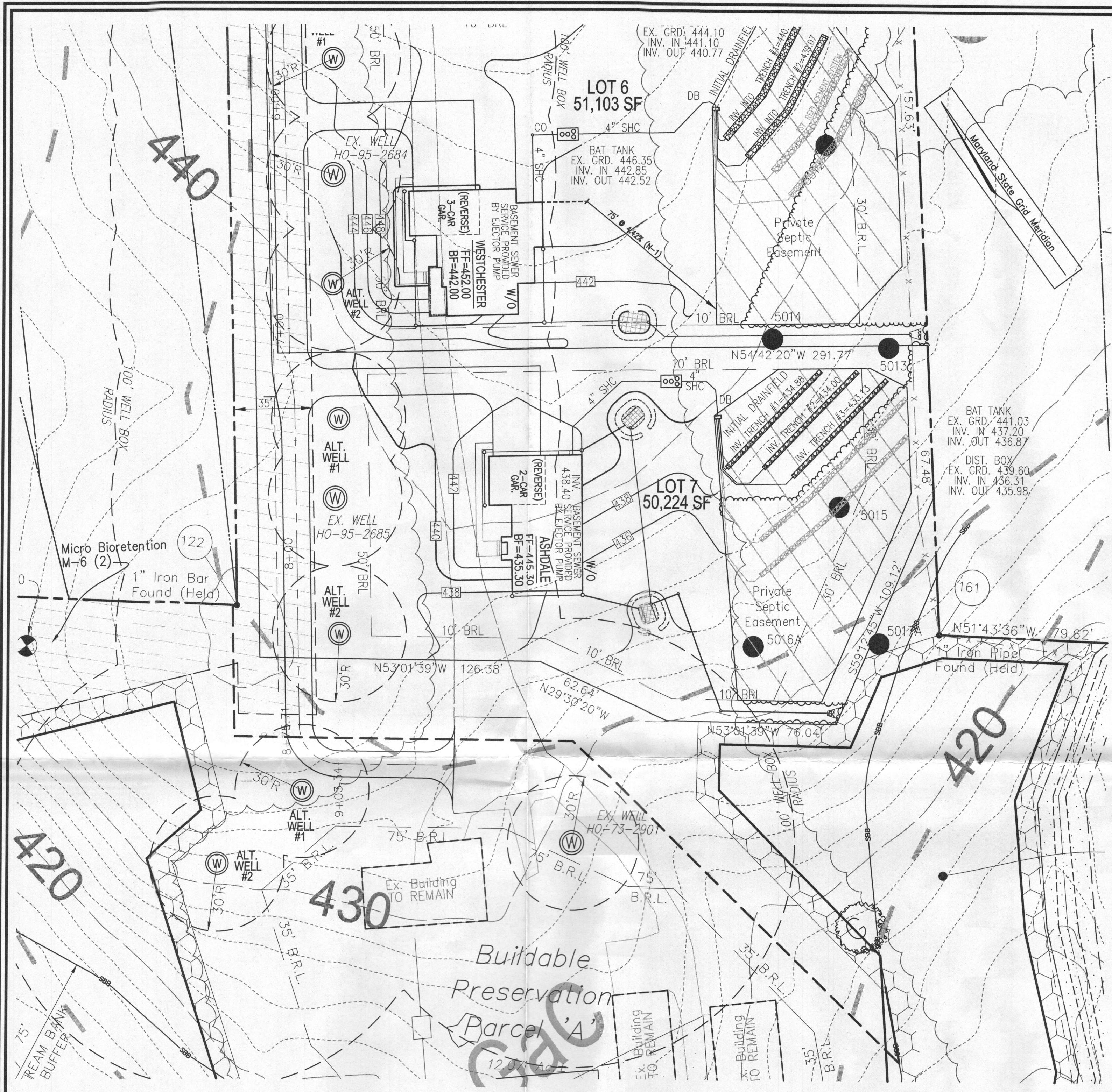
ROBERT H. VOGEL, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

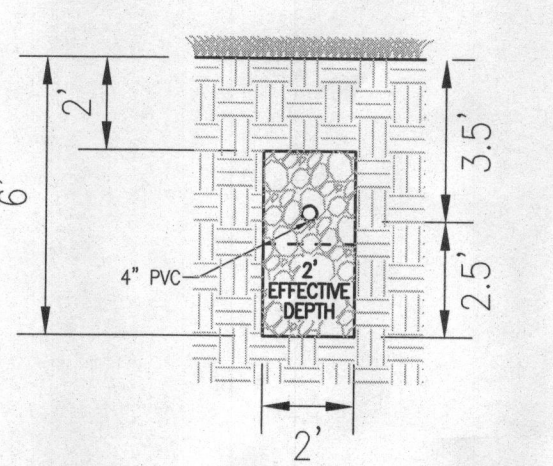
DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: MARCH 2016
 SCALE: AS SHOWN
 W.O. NO.: 14-24

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18193, EXPIRATION DATE: 09-27-2016

1 SHEET OF 1



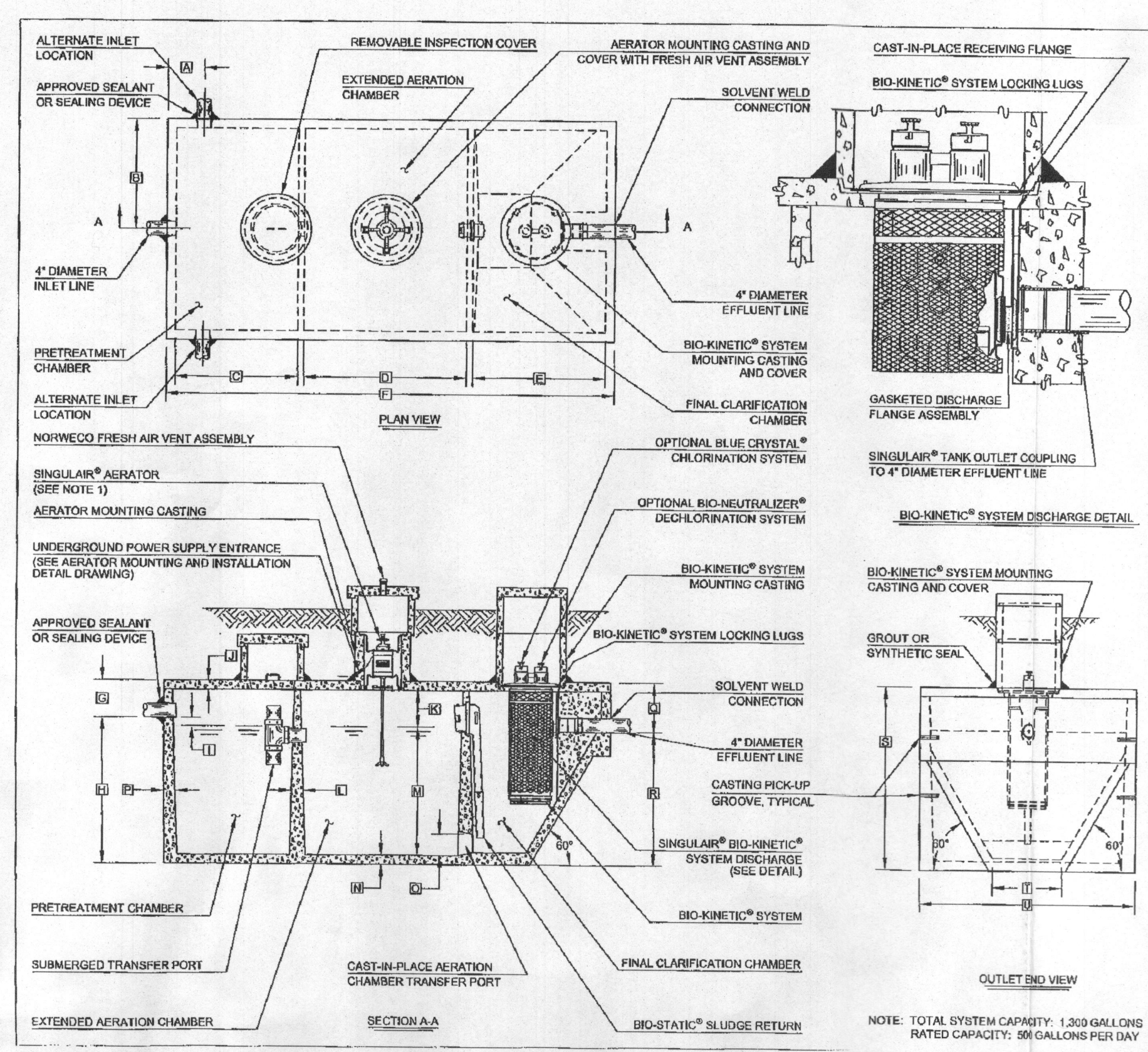
BAT PLAN
SCALE: 1"=30'



INITIAL SYSTEM AND 1ST REPLACEMENT TRENCH DETAIL
NOT TO SCALE

SYSTEM CALCULATIONS:
INITIAL SYSTEM AND FIRST REPLACEMENT SYSTEM:
5 BEDROOMS AT 750gpd / 1.2 ABSORPTION RATE = 625 SQ. FT.
625 SQ. FT. / 2 (TRENCH WIDTH) x .57 (SIDEWALL REDUCTION) = 178 LINEAR FEET
180 TOTAL LINEAR FEET OF TRENCH ARE PROVIDED WITH THE INITIAL SYSTEM.
180 TOTAL LINEAR FEET OF TRENCH ARE PROVIDED WITH THE FIRST REPLACEMENT SYSTEM.

TRENCH	TRENCH LENGTH	TRENCH WIDTH	EXISTING GROUND
1	60'	434.88	432.38
2	60'	434.00	431.50
3	60'	433.13	430.63



- GENERAL NOTES:**
- SINGULAR® AERATOR, AS TESTED AND ACCEPTED BY NHC, OPERATING 60 MINUTES ON / 60 MINUTES OFF.
 - FALL THROUGH SINGULAR® PLANT FROM INLET INVERT TO OUTLET INVERT IS FOUR INCHES. INLET INVERT IS TWELVE INCHES BELOW TANK TOP.
 - ON OPERATOR INSTALLATIONS, PRECAST RISERS MUST BE USED TO EXTEND AERATOR MOUNTING CASTING AND BIO-KINETIC SYSTEM MOUNTING CASTING TO GRADE.
 - TANK REINFORCED PER ACI STD. 318-05.
 - REMOVABLE COVERS OR RISERS WEIGH IN EXCESS OF SEVENTY-FIVE POUNDS FACT TO PREVENT UNAUTHORIZED ACCESS.
 - CONTACT THE LOCAL LICENSED SINGULAR® DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.

PROJECT ENGINEER'S APPROVAL:
I (WE) HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.

DATE: _____

NAME: _____

CONTRACTOR'S CERTIFICATION:
I (WE) HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.

DATE: _____

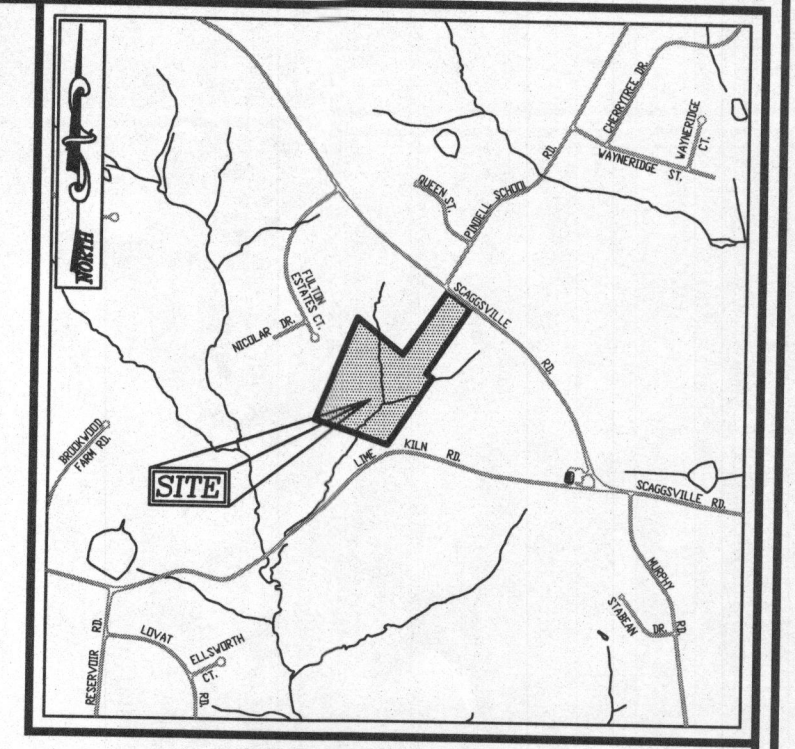
NAME: _____

CRITICAL DIMENSIONS

1	12'-0"	12'-0"
2	12'-0"	12'-0"
3	12'-0"	12'-0"
4	12'-0"	12'-0"
5	12'-0"	12'-0"
6	12'-0"	12'-0"
7	12'-0"	12'-0"
8	12'-0"	12'-0"
9	12'-0"	12'-0"
10	12'-0"	12'-0"
11	12'-0"	12'-0"
12	12'-0"	12'-0"
13	12'-0"	12'-0"
14	12'-0"	12'-0"
15	12'-0"	12'-0"
16	12'-0"	12'-0"
17	12'-0"	12'-0"
18	12'-0"	12'-0"
19	12'-0"	12'-0"
20	12'-0"	12'-0"

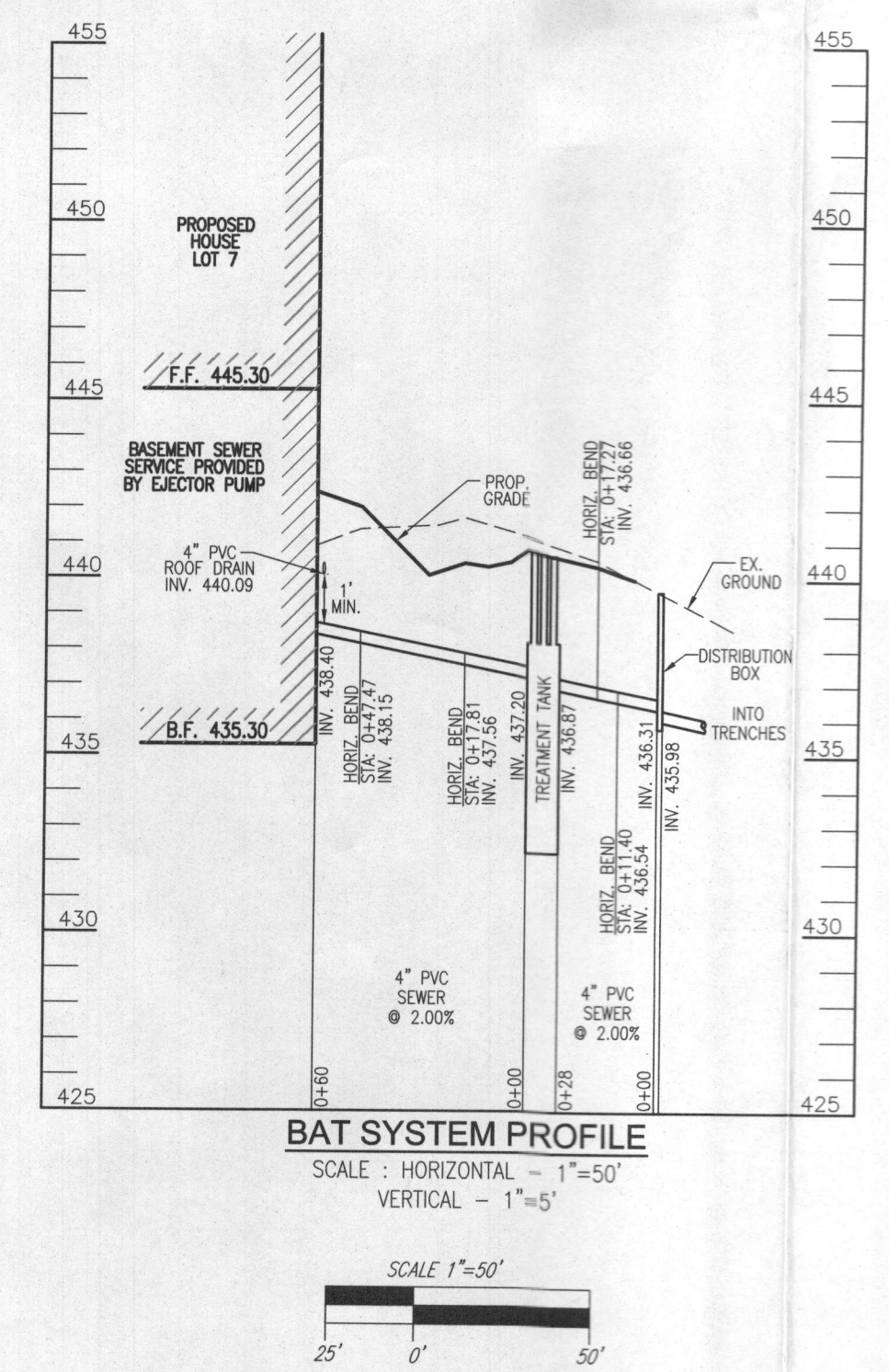
norweco 1-800-927-1141
LOW-POLLUTANT WASTEWATER TREATMENT SYSTEMS
MODEL: PRO-1000-010
1000 GPD
10" DIA.
10' L

NOTE: TOTAL SYSTEM CAPACITY: 1,200 GALLONS
RATED CAPACITY: 500 GALLONS PER DAY

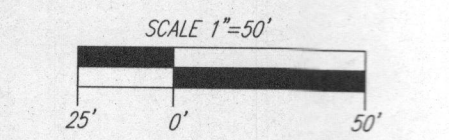


VICINITY MAP
SCALE: 1"=2,000'

- LEGEND:**
- PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - ADJACENT PROPERTY LINE
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING 10' CONTOUR
 - EXISTING 2' CONTOUR
 - SOILS
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - EXISTING WELL
 - PROPOSED 10' CONTOUR
 - PROPOSED 2' CONTOUR
 - PROPOSED SPOT ELEVATION
 - FAILED PERC. TEST
 - PASSED PERC. TEST
 - PROP. REPLACEMENT WELL
 - EXISTING WELL FIELD LOCATED
 - APPROVED SEPTIC AREA



BAT SYSTEM PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



- GENERAL NOTES:**
- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
 - THE MAXIMUM DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 3 FEET.
 - NO BLOWER IS REQUIRED. THE NORWECO WASTEWATER TREATMENT SYSTEM HAS AN AERATOR MOUNTED IN THE TANK.
 - THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
 - THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
 - WITHIN ONE MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) IN A MANNER ACCEPTABLE TO MDE, THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF BAT INSTALLED.
 - ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
 - AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN LAND RECORDS OF HOWARD COUNTY.
 - THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.

Approved Septic System Plan
Howard County Health Department
Mark Oswald 3/22/16
Signature Date

OWNER
COLLIE, LLC
5300 DORSEY HALL DR., SUITE 102
ELLICOTT CITY, MARYLAND 21042
ATTN: MR. DONALD R. BEUWER, JR.
443-367-0422

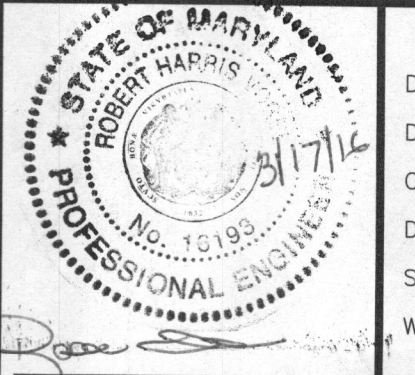
BUILDER
DOUGLAS HOMES, INC.
5034 DORSEY HALL DR., SUITE 102
ELLICOTT CITY, MARYLAND 21042
410-984-4234

SITE PLAN FOR BAT INSTALLATION

FULTON MANOR VALLEY - LOT 7
11813 COLLIE COURT
FULTON, MD 20759

BUILDING PERMIT #

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

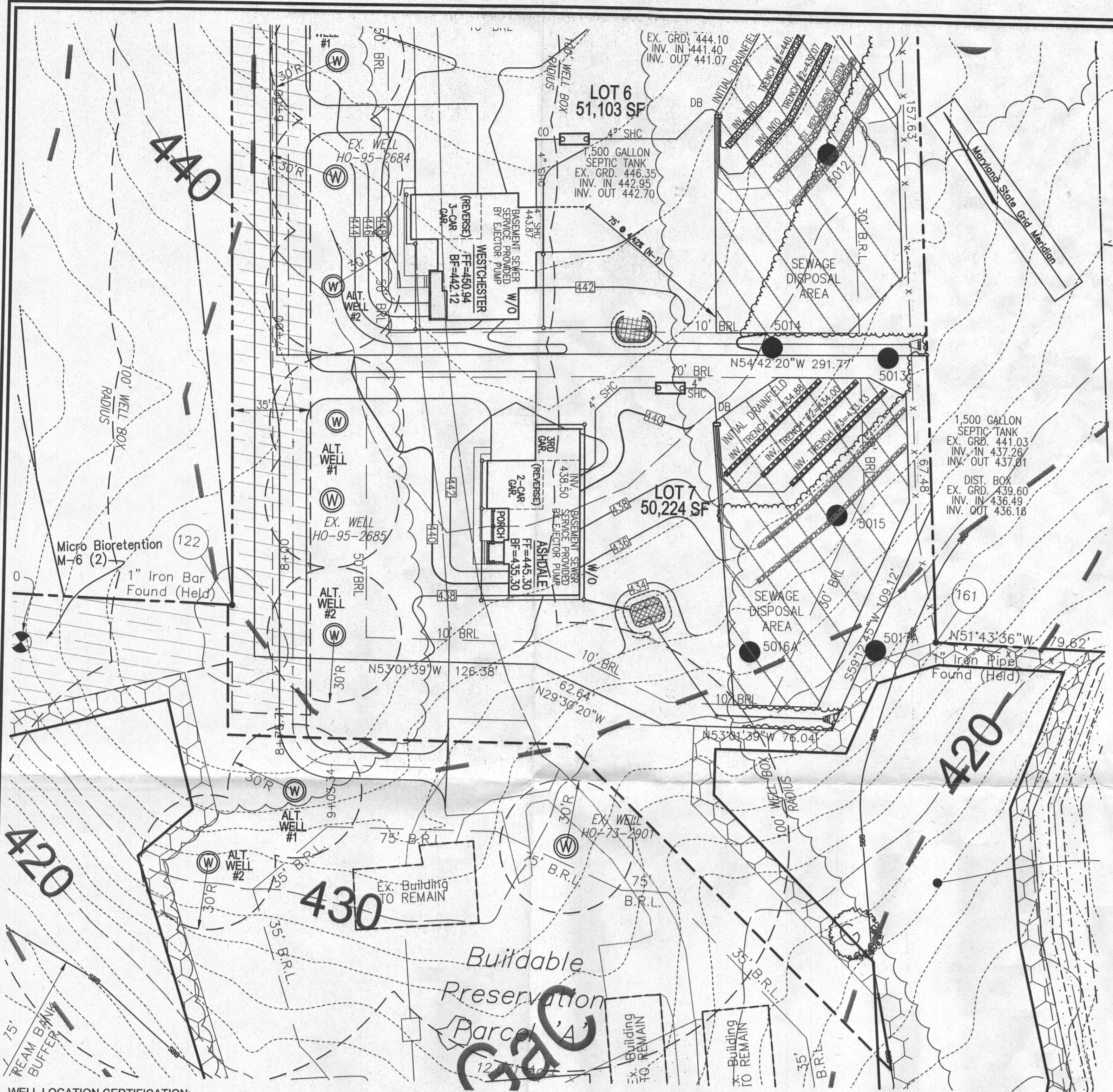


DESIGN BY: RHY
DRAWN BY: JMR
CHECKED BY: RHY
DATE: MARCH 2016
SCALE: AS SHOWN
W.O. NO.: 14-24

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10193, EXPIRATION DATE: 03-31-2016

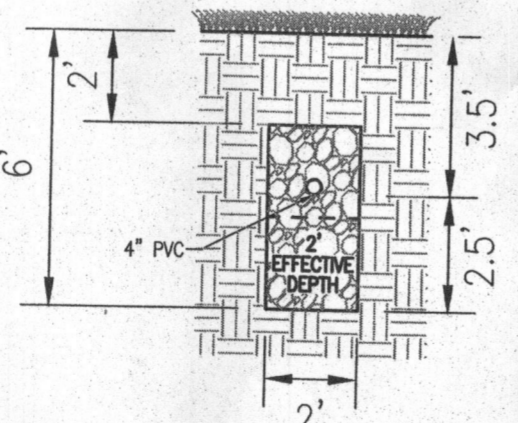
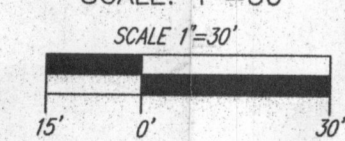
1 SHEET OF 1

THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT OF AT LEAST 10,000 SQ. FT. AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS EASEMENT ARE RESTRICTED. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A REVISED SEWAGE EASEMENT SHALL NOT BE NECESSARY.



WELL LOCATION CERTIFICATION:
 THE EXISTING WELL SHOWN ON THIS PLAN (TAG #HO-95-2685) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN

PLAN VIEW
 SCALE: 1"=30'

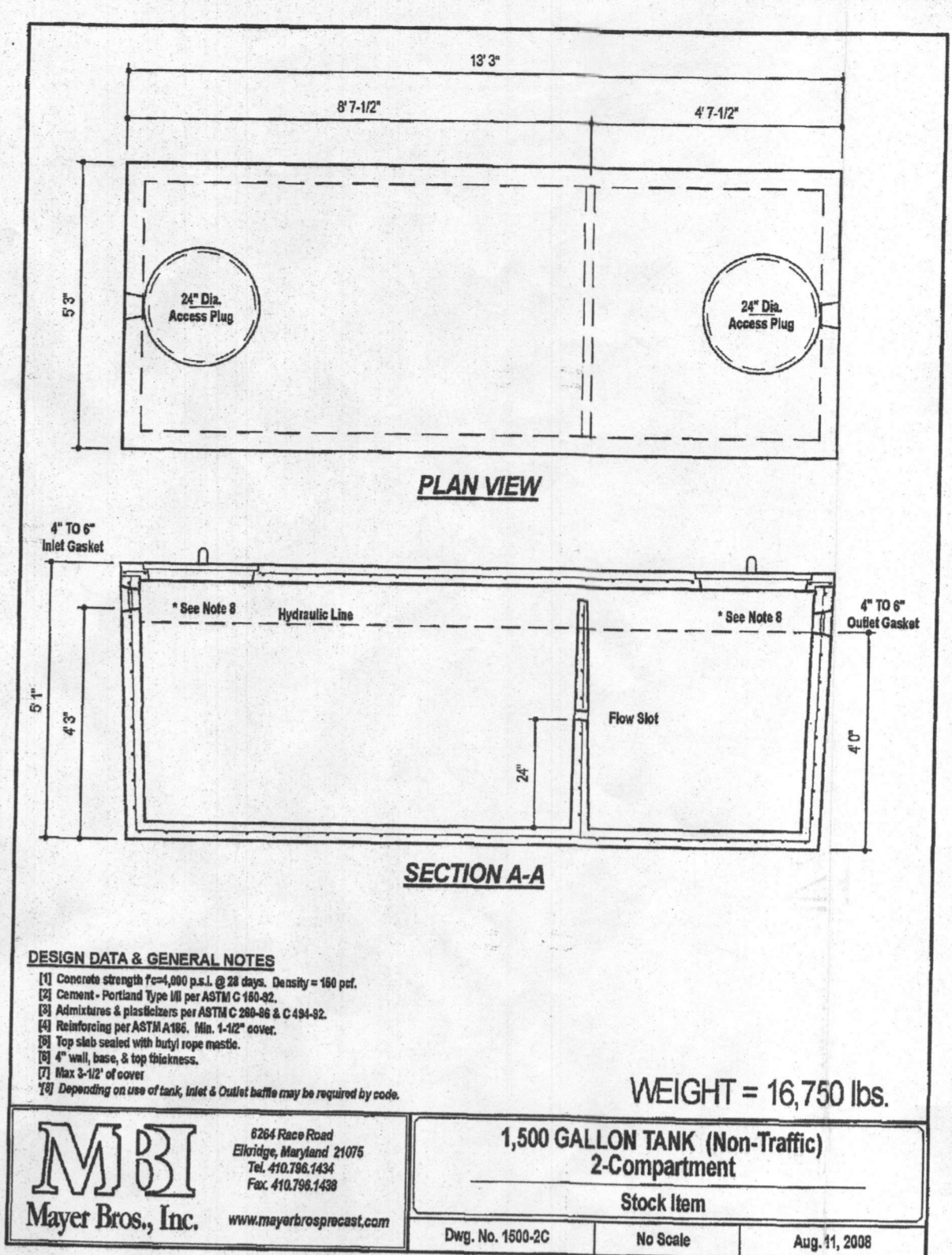


INITIAL SYSTEM AND 1ST REPLACEMENT TRENCH DETAIL
 NOT TO SCALE

SYSTEM CALCULATIONS:
INITIAL SYSTEM AND FIRST REPLACEMENT SYSTEM:
 5 BEDROOMS AT 750gpd / 1.2 ABSORPTION RATE = 625 SQ. FT.
 625 SQ. FT. / 2 (TRENCH WIDTH) = 312.5 (SMALL REDUCTION) = 178 LINEAR FEET
 180 TOTAL LINEAR FEET OF TRENCH ARE PROVIDED WITH THE INITIAL SYSTEM.
 180 TOTAL LINEAR FEET OF TRENCH ARE PROVIDED WITH THE FIRST REPLACEMENT SYSTEM.

TRENCH INFO			
TRENCH LENGTH	TRENCH I	TRENCH II	EXISTING GROUND
1 60'	434.88	432.38	438.38
2 60'	434.00	431.50	437.50
3 60'	433.13	430.63	436.63

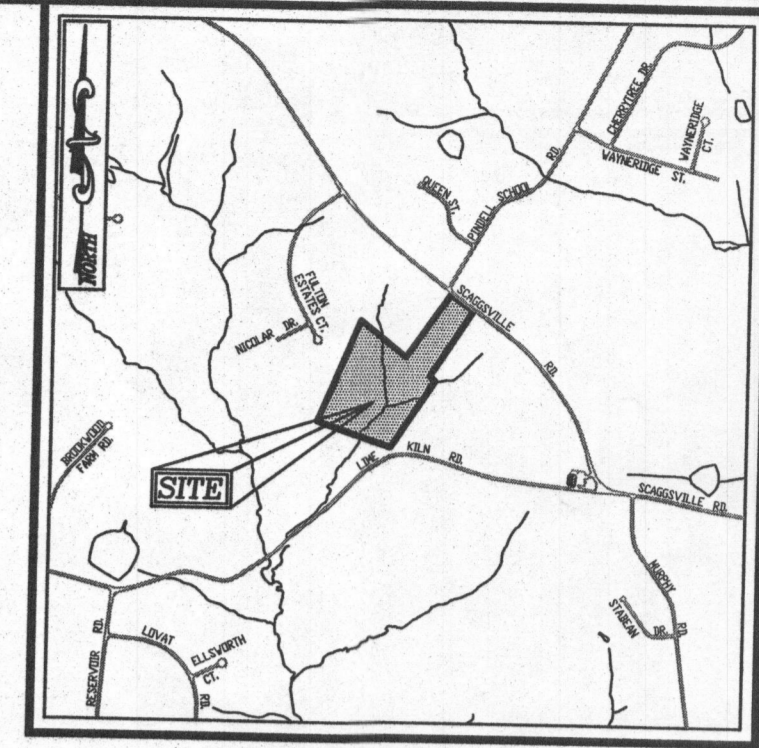
THIS AREA DESIGNATES A PRIVATE SEWAGE AREA OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWAGE IS AVAILABLE. THESE AREAS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE AREA. RECORDED OF A MODIFIED SEWAGE AREA SHALL NOT BE NECESSARY.



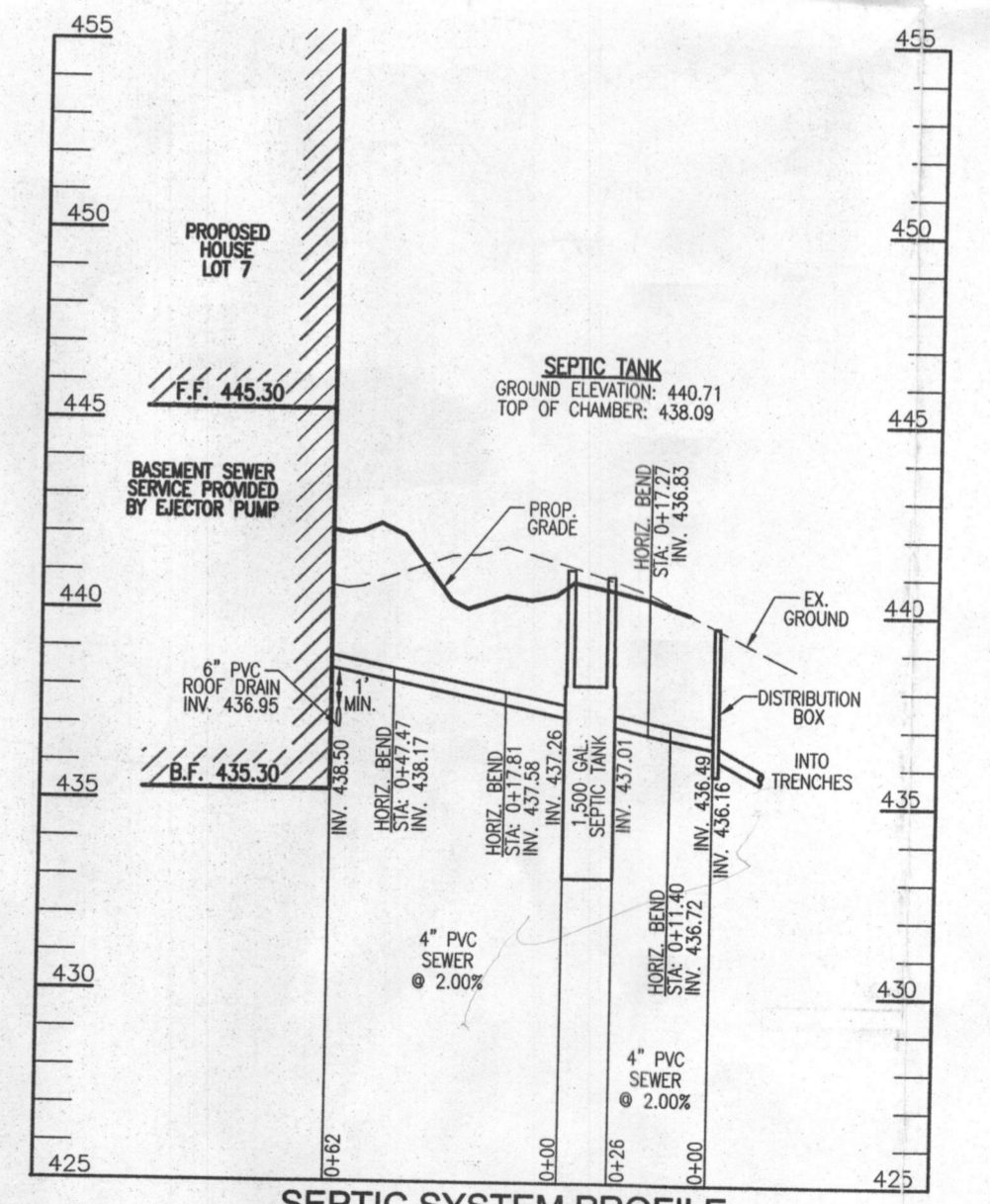
DESIGN DATA & GENERAL NOTES
 (1) Concrete strength F=4,000 p.s.i., G=50,000 p.s.i., Density = 150 p.c.f.
 (2) Concrete Reinforcement Type 10 per ASTM A 618-02
 (3) Admixture & plasticizer per ASTM C 494-02 & C 189-02
 (4) Manufacturing per ASTM A 118, 118, 118
 (5) Top 1/4\"/>

1,500 GALLON TANK (Non-Traffic) 2-Compartment
 Stock Item
 Weight = 16,750 lbs.
 Dwg. No. 1600-02 No Scale Aug. 11, 2008

MBI
 Mayer Bros., Inc.
 6244 Race Road
 Ellicott City, Maryland 21075
 Tel: 410.796.6464
 Fax: 410.796.6408
 www.maybro.com



- LEGEND:**
- PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - - - ADJACENT PROPERTY LINE
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING 10' CONTOUR
 - EXISTING 2' CONTOUR
 - SOILS
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - EXISTING WELL
 - PROPOSED 10' CONTOUR
 - PROPOSED 2' CONTOUR
 - PROPOSED SPOT ELEVATION
 - FAILED PERC. TEST
 - PASSED PERC. TEST
 - PROP. REPLACEMENT WELL
 - EXISTING WELL FIELD LOCATED
 - APPROVED SEPTIC AREA



SEPTIC SYSTEM PROFILE
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

Approved Septic System Plan
 Howard County Health Department
 Signature: [Signature] 12/28/16
 Date: [Date]
 (Approved for 5' BR Floor Plan)

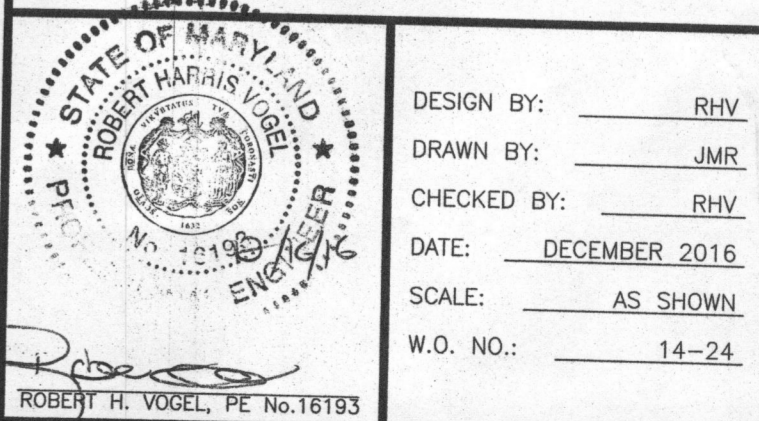
OWNER:
 COLLE, LLC
 5300 DORSEY HALL DR., SUITE 102
 ELLICOTT CITY, MARYLAND 21042
 ATTN: MR. DONALD R. REULWER, JR.
 443-367-0422

BUILDER:
 DOUGLAS HOMES, INC.
 5034 DORSEY HALL DR., SUITE 102
 ELLICOTT CITY, MARYLAND 21042
 410-984-4234

ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN
FULTON MANOR VALLEY - LOT 7
 11813 COLLIE COURT
 FULTON, MD 20759
 BUILDING PERMIT #

TAX MAP: 41 GRID: 19 PARCELS: 78 & 456
 5TH ELECTION DISTRICT ZONED: RR-DEO
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043 TEL: 410.461.7666
 FAX: 410.461.8961



PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2018

DESIGN BY: RHV
 DRAWN BY: JMR
 CHECKED BY: RHV
 DATE: DECEMBER 2016
 SCALE: AS SHOWN
 W.O. NO.: 14-24

- GENERAL NOTES:**
- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
 - THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
 - ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
 - THE WELL (HO-95-2685) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
 - ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.